

## **AORTIC STENOSIS (ICD9 424.11)**

Revised: June 2004

**AEROMEDICAL CONCERNS:** Aircrew members with aortic stenosis (AS) generally remain asymptomatic for many years. When symptoms develop they often start with angina, syncope, or left ventricular failure. The onset of these symptoms herald the start of increased risk of sudden death. Syncope has been reported in up to 20% of cases of aortic stenosis; it may even occur with mild AS. Sudden death occurs in 15-30% of all cases, with 3-5% occurring in symptom-free patients. Left ventricular failure may predispose individuals to dysrhythmias or syncope, and increased risk of sudden death. When the diagnosis of aortic stenosis is made, the patient must be followed closely to continuously assess valvular and left ventricular function.

### **WAIVERS:**

#### **Initial Class 1A/1W Applicants:**

No exception to policy is recommended.

#### **Initial Classes 2, 3 and 4:**

Very mild AS (gradients below 20mm Hg) may be considered acceptable for all aviation related duties and filed as *Information Only*. Bicuspid aortic valves with no other associated findings may also be considered qualified and filed as *Information Only*.

#### **Rated Aviation Personnel (All Classes):**

Mild AS, as above. Moderate AS may be considered for waiver provided complete cardiology evaluation is negative. AS with syncope, or other symptom complex are considered unfavorable for waiver action. Surgery is also considered disqualifying with no waiver recommended.

**INFORMATION REQUIRED:** Complete cardiology consultation is required including AGXT, 24-hour Holter monitor, and ECHO with Doppler flow study. Cardiac catheterization may be required. Consultation with the designated Aeromedical Cardiologist may be recommended by USAAMA.

**FOLLOW-UP:** Annual cardiology evaluation to include ECHO with Doppler flow study.

**TREATMENT:** SBE antibiotic prophylaxis is required for all dental procedures as well as any other potentially septic exposure. SBE antibiotic prophylaxis is recommended for both bicuspid aortic valve and aortic stenosis. Neither aortic valvuloplasty nor aortic valve replacement have been considered for favorable waiver action.

**DISCUSSION:** AS in individuals less than 30 years of age is almost always the result of a congenitally abnormal valve. When found in elderly patients (over 60 years of age), AS may be secondary to the calcific changes in a tricuspid valve. AS due to rheumatic

heart disease is usually accompanied by mitral stenosis or regurgitation. The severity of bicuspid valvular aortic gradient increases with age.